ABSTRACT OF THE DISCLOSURE

High precision continuous time g_mC BPF (Band Pass Filter) tuning. A novel approach is presented by which a continuous time signal serves as a BPF control voltage for tuning of a BPF within a communication device (e.g., transceiver or receiver). A PLL (Phase Locked Loop) tunes the center frequency of the BPF using this continuous time signal, and the PLL oscillates at the center frequency of the BPF. The BPF is implemented as a g_mC (transconductance-capacitance) filter, and the PLL is implemented using a number of g_m (transconductance) cells as well. The PLL's g_m cells and the BPF's g_m cells are substantially identical in form. All of these g_m cells are operated within their respective linear regions. This similarity of g_m cells within the PLL and the BPF provide for substantial immunity to environmental perturbations including temperature and humidity changes as well as fluctuations of power supply voltages.